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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,272	04/07/2000	Senthil Sivakumar	CISCO-1787	1978

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EXAMINER

MILLS, DONALD L

ART UNIT	PAPER NUMBER
2662	8

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,272

Applicant(s)

SIVAKUMAR, SENTHIL

Examiner

Donald L Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,310,874 B1), hereinafter referred to as Miller, in view of Barkai et al. (US 6,188,691), hereinafter referred to as Barkai.

Regarding claims 1 and 9, Miller discloses a switch, which comprises *allowing broadcast flooding until a mapping of a MAC address to a port is performed by the bridge* (Referring to Figure 3, the data unit is flooded, step 56, and flow returns to step 50 and discontinues flooding if the destination address is in the address table in step 52 of the switch. See column 4, lines 61-66 and column 5, lines 4-6.) Miller does not disclose *disallowing broadcast flooding after the mapping is achieved*.

Barkai teaches a method for maximizing network efficiency and reducing performance degradation by preventing flooding of traffic on all ports on all level 2 devices (See column 7, lines 16-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the flooding prevention method of Barkai in the switch of Miller. One

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of ordinary skill in the art would have been motivated to so in order to maximize network efficiency by reducing excessive flooding of packets.

3. Claims 2-5 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,310,874 B1), hereinafter referred to as Miller, in view of Barkai et al. (US 6,188,691), hereinafter referred to as Barkai, in further view of Flanders et al (US 6,041,058), hereinafter referred to as Flanders.

Regarding claims 2 and 10 as explained above in the rejection statement of claims 1 and 9; Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims). Miller and Barkai do not disclose *wherein the allowing and disallowing of broadcast flooding is carried out for each MAC address independently*.

Flanders teaches a protocol type filters that are applied to all MAC unicast, multicast, and broadcast frames (See column 9, lines 2-4). Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filtering technique of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to so in order to improve network operation by filtering repetitive frames.

Regarding claims 3 and 11 as explained above in the rejection statement of claims 1 and 9; Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims). Miller and Barkai do not disclose *wherein the bridge maintains a data structure to determine when to allow or disallow broadcast flooding*.

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Flanders teaches protocol filters which are implemented via a protocol filter table 154 that contains a specification of whether to filter broadcast frames (See column 8, lines 66-67). Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filter table of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to so in order to specify the filtering of broadcast frames to improve network operation.

Regarding claims 4 and 12 as explained above in the rejection statement of claims 1 and 9; Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims). Miller and Barkai do not disclose *wherein the data structure is a filter table*.

Flanders teaches protocol filters which are implemented via a protocol filter table 154 that contains a specification of whether to filter broadcast frames (See column 8, lines 66-67). Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filter table of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to so in order to specify the filtering of broadcast frames to improve network operation.

In regards to claims 5 and 13 as explained above in the rejection statement of claims 1 and 9, Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims).

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Miller and Barkai do not disclose *wherein the filter table contains MAC address information with associated flooding time period.*

Flanders teaches a counter that can be reset at predefined intervals, which tracks broadcast frames and compares the count against a threshold to determine whether the frame should be filtered (See column 9, lines 15-17). Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filter table of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to so in order to filter each frame at predefined intervals to improve network operation.

Response to Arguments

4. Applicant's arguments with respect to claims 1-5 and 9-13 have been considered but are moot in view of the new ground of rejection.

Conclusion

5. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

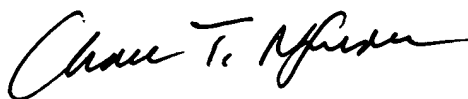
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Donald L Mills



November 6, 2003



CHAU NGUYEN
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